

GP-303308

## HIGH OUTPUT MAGNETIC INERTIAL FORCE GENERATOR

### ABSTRACT OF THE DISCLOSURE

A magnetic force generator includes a magnetic shell internally defining an armature chamber. At least three circumferential electric coils are spaced axially within the chamber. An armature supported in the  
5 chamber for reciprocation therein includes a plurality of aligned magnets separated by at least one intermediate magnetic steel plate sandwiched between like poles of adjoining magnets and a pair of end steel magnetic plates on opposite ends of the armature. The plates extend laterally to a periphery of the armature in general lateral alignment with the electric coils.  
10 Springs nominally center the armature between non-magnetic ends of the chamber. Controlled energizing of the coils reciprocates the armature axially relative to the shell to develop an opposite inertia force on the shell for application to a connected body. The use of multiple magnets improves performance and/or reduces cost compared to a single magnet of comparable  
15 size.